# Darwin Initiative Main & Extra: Final Report

To be completed with reference to the "Project Reporting Information Note":
([https://www.darwininitiative.org.uk/resources/information-notes/](https://www.darwininitiative.org.uk/resources/information-notes/)).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes.

**Submission Deadline: no later than 3 months after agreed end date.**

**Submit to:** BCF-Reports@niras.com including your project ref in the subject line.

## Darwin Initiative Project Information

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| Scheme (Main or Extra) | Main |
| Project reference | 29-002 |
| Project title | Conserving and restoring orangutan habitat and ecosystems, Gunung Palung, Indonesia |
| Country(ies) | Indonesia |
| Lead Organisation | Fauna & Flora |
| Project partner(s) | 1. Gunung Palung National Park<br>2. Yayasan Palung<br>3. Manggala Agni |
| Darwin Initiative grant value | £360,610.00 |
| Start/end dates of project | 1 June 2022/31 March 2025 |
| Project Leader name | Arief Hamidi |
| Project website/blog/social media | Fauna-Flora.org |
| Report author(s) and date | Arief Hamidi, Rahmawati, Edy Noordiansyah, Jarian Permana |

## 1. Project Summary

Gunung Palung National Park (GPNP) and its 117,346 hectares of forest are home to orangutans and other endangered species, facing severe pressure from illegal logging, forest fires, plantations, and settlement expansion—leading to the loss of over 22,000 hectares in the buffer zone over the past decade. This project was designed to address these threats through collaborative protected area management and sustainable financing mechanisms that reduce forest loss, protect orangutan habitat, and improve the wellbeing of 11,223 people in four surrounding villages: Penjalaan, Rantau Panjang, Riam Berasap Jaya, and Sempurna. The project established four community–national park joint ranger teams (Protection and Monitoring Units/PMUs), trained and equipped with SMART (Spatial Monitoring And Reporting Tools) patrol tools and biodiversity monitoring skills, including fire mitigation awareness. These teams have identified 111 illegal activities and conducted biodiversity assessments that recorded orangutan populations and the presence of other endangered species such as Bornean Gibbons and Sunda Pangolins. Strengthening conservation management of GPNP and engaging communities is proving vital to reducing direct threats and building community-led forest protection capacity.

To improve livelihoods and reduce dependency on unsustainable forest use, the project has supported eight community business groups (KUPS), two village forest institutions (LPHDs), and thirteen Farmers Group. These groups have received variety of trainings in business planning, financial literacy, and

technical production (e.g., crafts, agroforestry, pre- and post-harvest coffee handling). A breakthrough on initial market linkages have been made, a follow up effort will continue to improve product quality and quantity to meet market demand and ensure long-term economic viability. Several products composition are honey, rattan, pandanus, and bamboo crafts.

Additionally, the project is facilitating access to sustainable financing mechanisms through Payment for Ecosystem Services (PES), carbon offset, and biodiversity offset schemes. Two LPHDs are being prepared to access investor funding via Project Document Development (PDD), following exposure and peer-learning with LPHD Manjau, which secured a 10-year biodiversity offset investment. This model aims to institutionalize community forest governance, strengthen local conservation leadership, and attract long-term investment, ensuring both ecological protection and socio-economic benefits are sustained.
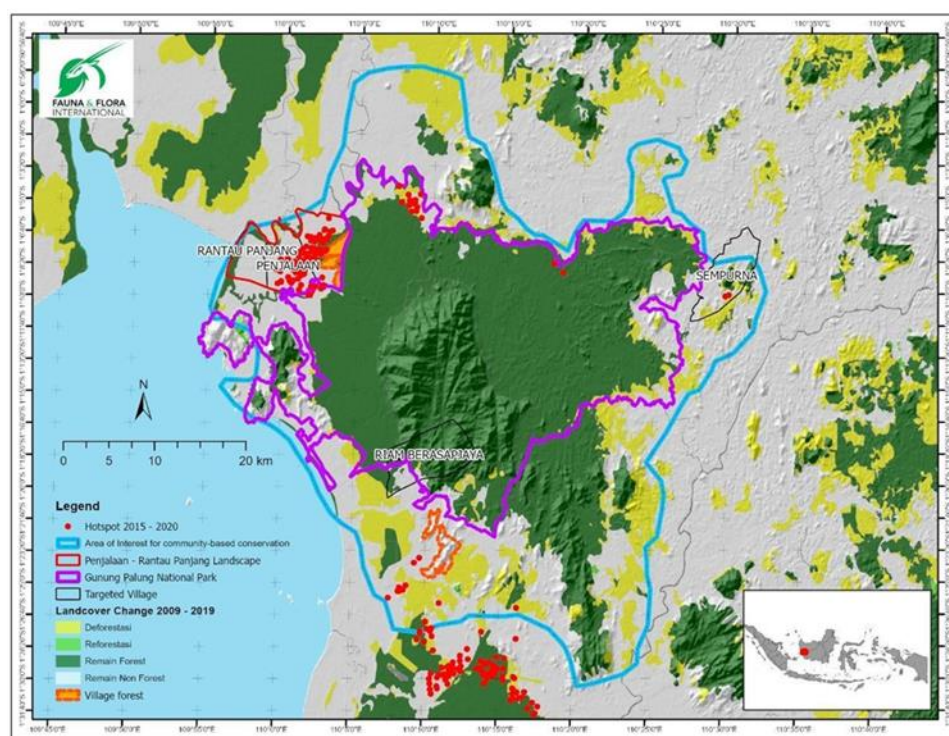


Figure. 1. Map of Project location

## 2. Project Partnerships

The Gunung Palung National Park (GPNP) authority, under the Ministry of Forestry's (MoF) Directorate General for Nature Resources and Ecosystem Conservation (KSDAE), leads technical management of the park and plays a central role in this project. Working under an MoU with Fauna & Flora (FF), GPNP provides fieldwork permits, technical guidance, and collaborates with communities in joint Protection and Monitoring Units (PMUs) to strengthen forest protection. Yayasan Palung (YP), with over two decades of conservation experience, focuses on community empowerment and orangutan research around GPNP. Within this project, YP leads sustainable livelihood interventions in Penjalaan and Rantau Panjang villages, including support for non-timber forest products (NTFPs), agroforestry, and aquaculture. Communities in Sempurna, Riam Berasap Jaya, and Laman Satong are also engaged as project beneficiaries through participation in business groups and joint forest patrols. Additional partners include Village Forest Institutions (LPHDs) in Penjalaan and Rantau Panjang, supported in forest management, conflict mitigation, and zero-burning practices; the Forest Management Unit of Kayong, which helps protect adjacent production forest areas; and Manggala Agni, Indonesia's forest fire brigade, which provides community training in fire prevention and response. These multi-stakeholder collaborations ensure an integrated and sustainable approach to conservation, community wellbeing, and landscape protection.

### 3. Project Achievements

#### 3.1. Outputs

**Output 1: Direct threats to forest habitats and rare and threatened species decrease, through effective joint operation of Protection & Monitoring Units (PMUs)**

<u>Indicator 1.1. Joint Patrol and Monitoring Unit (PMU) agreements between village communities (Rantau Panjang, Penjalaan, Sempurna, Riam Berasap Jaya) and GPNP established by Y1</u>

Established four PMU teams that were recognized by the village government and GPNP Management on year 1 project (PMU Agreements). The establishment of these PMU teams marked a significant step towards fostering collaboration between the park management and the local communities, strengthening active participation of local communities in conservation as well as ensuring the sustainability of the GPNP's natural resources. PMUs were established, management agreements set, and target species (e.g. Bornean Orangutan, Sunda Pangolin, Bornean Gibbons) selected per area.

Through knowledge transfer and gradual awareness raising, an agreement has been successfully reached with the village to form a team for the protection and security of orangutan habitats. This agreement was reached through our efforts in collaboration with KPH, Gunung Palung NP, and Yayasan Palung.

<u>Indicator 1.2. Four PMU teams (1 GPNP + 3-4 community rangers), totaling c.20 people, are trained in SMART patrolling/ biodiversity monitoring by end of Y1.</u>

Since its establishment in Y1, series of technical trainings were delivered to all PMU teams, covering SMART Patrol, biodiversity monitoring, safeguarding, and fire mitigation (Activity 1.6). A total of 31 participants from local institutions, GPNP staff, and the Forest Management Unit (FMU) were trained in SMART Patrol, achieving 80% understanding based on post-test results. The training covered patrol operations, data recording, geotagging, and use of the SMART mobile application. Additionally, biodiversity survey training was conducted for 20 participants, focusing on techniques such as transect walks, camera trapping, and species-specific surveys for orangutans, Bornean gibbons, and Sunda pangolins, with an overall understanding level of 65%. Fire mitigation training was provided for PMUs in peat-prone areas like Penjalaan and Rantau Panjang, resulting in the development of fire prevention procedures. These, along with broader patrol procedures—including offender sanctions, coordination mechanisms, and threat data collection—were formalized into a Standard Operating Procedure (SOP) through a workshop process conducted from August 2022 to February 2023. The SOP now serves as a key operational guideline for all PMU patrol activities across Village Forest and GPNP buffer areas. (See MOV 2022_10_Pelatihan Patroli SMART Gabungan .docx)

<u>Indicator 1.3. Workplans and operational areas for PMUs defined by end of Y1.</u>

Achieved by Y1. Workplan of PMU Penjalaan and Rantau Panjang has been resolved and incorporated into a Standard Operating Procedure (SOP) which contains offender sanctions, coordination mechanisms, and threat data collection. In the meantime, PMU Riam Berasap Jaya and Sempurna  workplan also being determined and synchronized under GPNP patrols' workplan. Operational areas have been agreed and prepared separately. (See MoV Workplan Patrols - Rantau Panjang and Penjalaan - Maps.png). These work plans were developed through one joint meeting with the PMU team following the smart patrol training.

<u>Indicator 1.4. A minimum of 5 patrol days are taking place per month, starting in Y2/ Q1 until project end.</u>

During 2022-2025, as was incorporated in the workplan, four PMU teams was deployed to operate 84 patrols by SMART along 20 months totalling 300 effective days (approx. 5 days per month per team) and 4620.1 km patrol distances. In the second year, 32 patrols were conducted over 160 days in four project locations. The locations included 9 patrols in the Muara Palung village forest area (Rantau Panjang Village), 10 patrols in the Simpang Keramat village forest area (Penjalaan Village), 10 patrols in the Sempurna resort area, and 3 patrols in the Pangkal Tapang resort area (Riam Berasap Jaya Village) of Gunung Palung National Park. A total distance of 2,544.61 km was covered using speedboats, motorcycles, and on foot.

Specific in the Y3, 28 patrols were carried out over 140 days in four project locations. These locations included 10 patrols in the Muara Palung village forest area (Rantau Panjang Village), seven patrols in the Simpang Keramat village forest area (Penjalaan Village), eight patrols in the Sempurna resort area, and four patrols in the Pangkal Tapang resort area (Riam Berasap Jaya Village) in Gunung Palung National Park. A total distance of 2,075.49 km was covered using speedboats, motorcycles, and on foot.

In addition to patrols, we also collected data on basic target species achieved per year in the second year of the project: Sunda pangolin population (0.27 per km² in VF Penjalaan, including the VF Rantau Panjang area) using camera traps, and Bornean gibbon density (0.31 per km² in VF Rantau Panjang & Penjalaan; 0.23 per km² in Gunung Palung National Park) using the triangle counting method (see MoV Summary Report Biodiversity.pdf).

Indicator 1.5. At least one joint patrol involving MoEF's law enforcement agency/ police is conducted per year during Y2 and Y3.

During the 2022–2025 period, two joint law enforcement patrols were conducted (one patrol in the second year and one in the third year) involving various law enforcement agencies. The joint patrol determined through internal discussions within PMU, FMU and our team based on patrol results, including areas and inviting law enforcer parties. In the following year, during a joint operation, law enforcement officials apprehended two individuals involved in illicit timber harvesting activities in Penjalaan VF on June 20th and 21st of 2023. In the third year, the joint patrol team extinguished 3 hectares of burned land in the Rantau Panjang village forest on September 20-21, 2024, with the participation of relevant stakeholders. The prevailing hypothesis regarding the cause of the fire is the result of land clearing for oil palm plantations; the case remains under active investigation (See table 1).

Table 1. Joint patrols during 2022-2025 periods

| Year | Locations | Stakeholder Participated | Additional Notes |
|------|-----------|--------------------------|------------------|
| 2023 | Penjalaan Village Forest | 10 people (Male:10) incl. LPHD, TNI, Police, FMU, GPNP rangers, village govt. | Illegal logging crackdown in the area |
| 2024 | Rantau Panjang Village Forest | 10 people (Male:10) incl. LPHD, TNI, Police, FMU, GPNP rangers, village govt. | Land clearing enforcement by burning |

**Output 2: 11,223 people in four communities around Gunung Palung have improved resilience to climate change through improved prevention and management of fires, water table management and peat swamp forest rehabilitation.**

Indicator 2.1 Decreased incidents of uncontrolled fires in 4 target villages with improvements, on both peat and mineral soils, by Y3 compared to 2019 (pre-pandemic).'

During the three years of project implementation, uncontrolled fire incidents decreased in the four target villages (see Table 2). We used annual hotspot analysis to determine fire incidents in the target area. We set the baseline in 2019 before project implementation for entire target areas, and comparing to annual analysis from 2022-2025 on each targeted villages as well as summed for total areas. The comparison to baseline is calculated for total target areas, while we analysed on each village for management purpose. Hotspot analysis using MODIS C6.1 showed hotspot detection during the 2022-2025 period, or from the first year of the project to the third year of the project. (see GPNP LULC 032025 report - En.docx).

Table 2. Hotspots in 4 target villages during 2022-2025 based on MODIS/NOAA data

| Locations | 2019 (baseline) | Y1 (2022-2023) | | Y2 (2023-2024) | | Y3 (2024-2025) | |
|-----------|-----------------|----------------|-------------|----------------|-------------|----------------|-------------|
| | Number | Number | Reduced (%) | Number | Reduced (%) | Number | Reduced (%) |
| Rantau Panjang | N/A | 3 | 98.0 | 3 | 98.0 | 0 | 100.0 |
| Penjalaan | | 15 | 90.0 | 1 | 99.3 | 0 | 100.0 |
| Sampurna | | 0 | 100.0 | 5 | 96.7 | 0 | 100.0 |
| Riam Berasap Jaya | | 1 | 99.3 | 0 | 100.0 | 2 | 98.7 |
| Other area | | 4 | 97.3 | 4 | 97.3 | 3 | 98.0 |

| Total | 150 | 23 | 84.7 | 13 | 91.3 | 5 | 96.7 |

Based on Table 2 above, it shows that total hotspots decreased by 96.7% on end project compared to baseline (2019). The rate of decline in hotspot detection by MODIS/NOAA decreased by 5.3% to 6.7 % or by mean at 6% per year over the last three years. We assumed that if conservation actions are consistently implemented in the four project areas, there will be no more hotspots detected by MODIS/NOAA by the fourth year. Ground checks of hotspots were also conducted to validate the causes of fires at four project locations. Three forest fires occurred in the first year, one active fire in the second year, and two active fires in the third year. Investigators found that the hotspots were intended for land clearing. In addition to monitoring hotspots with MODIS, we conduct ground checks through SMART-based patrols. In year one, we did not find any active hotspots. In year two, we found one active hotspot. In year three, we found two active hotspots.

## Indicator 2.2 At least 8 canal-blocking barriers are implemented in peat soil villages, by end of Y2, based on hydrological assessments.

Based on result of hydrological study on peat By Y1, in March 2024 we constructed seven canals blocking as recommended by expert (see Canal Blocking.pdf). Before and after their installation, seven times water table monitoring has been carried out in 9 spots (3 in Penjalaan, 6 in Rantau Panjang) to evaluate the impact of these structures on peatland hydrology (Figure 2.).
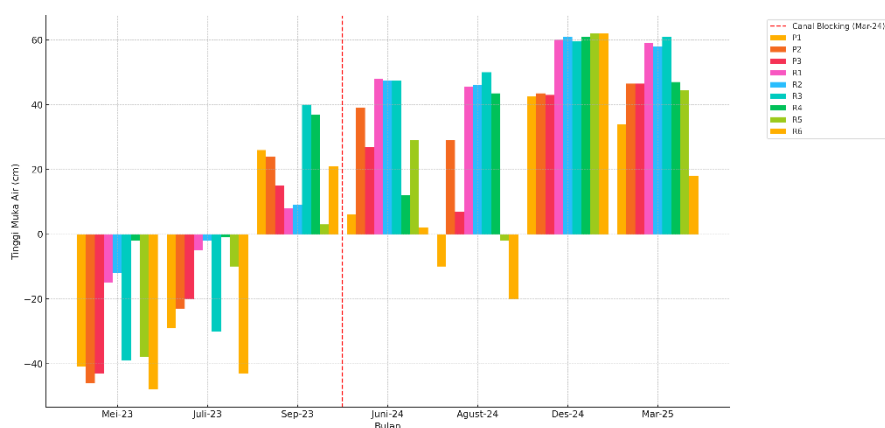


Figure 2. Water Table of 9 plots along 2023-2025 in Penjalaan and Rantau Panjang

Based on water table (WT) monitoring report (See MoV WT Report.docx), the WT is shown raising up to 47 cm, from the average -9.78 cm or below the surface (before installation) to the average of +37.18 cm (after installation). This increasing process indicates that the construction of the canal barrier has had a significant impact on the rise in the water table, hence rewetting the peatland ecosystem. This is crucial for maintaining peatland moisture levels and plays a role in reducing the risk of drought and the potential for land fires.

## Indicator 2.3 10,000 native forest species seedlings have been planted in re-wetted degraded peat swamp forest, with a minimum survival rate of 70%, by project end.

As part of our commitment to the Rantau Panjang Village Forest rehabilitation program, we have planted 10,000 native tree seedlings in line with our initial target. To ensure the success of the planting, we have also conducted a replanting of an additional 1,000 seedlings. However, based on the latest evaluation, the current survival rate of the plants is 61%, slightly below the target of 70%. (See MoV restoration report.docx) To overcome these challenges and maintain the momentum of forest restoration, we have taken several strategic steps:
1. Cooperation with KPH – We provided supports to the Forest Management Unit (KPH) in the form of having additional nursery establishment and seedlings to ensure that replanting continues in the affected areas. About 3,000 seedlings produced and ready to be planted. Seedling in Nursery KPH KAYONG.docx
2. Penjalaan LPHD initiative – The Penjalaan Village Forest Management Institution (LPHD) has also shown strong initiative by independently planting approximately 500 seedlings in the village forest area as part of a joint commitment to preserve the environment.

**Ouput 3: Capacity of at least four community groups representing 500 households (>3,000 people) is increased to diversify livelihood opportunities based on biodiversity-friendly products**

Indicator 3.1 Community business groups, representing 500HH and of whom >30% of members are women, are established and trained in business planning and finance management by Y1.
The project has supported two Village Forest Management Institutions (LPHDs), eight Social Forestry Business Groups (KUPS), and 13 Farmer Groups across Rantau Panjang, Penjalaan, Sempurna, and Riam Berasap villages, engaging a total of 514 individuals (63% men and 37% women) over the past three years. These groups are involved in diversified livelihood activities including coffee agroforestry, horticulture, honey production, weaving, and aquaculture. Key capacity-building activities included a coffee agroforestry field school in Penjalaan in July 2022, which trained 35 participants in seedling preparation, land management, harvesting, and post-harvest processing.

From April to October 2023, ongoing technical assistance focused on improving production quality, market access, and business sustainability. Coffee production increased significantly for two KUPS in Penjalaan, though market access to private buyers remains limited due to volume and quality constraints. Honey's production faced setbacks due to flooding, while weaving and chili farming groups showed encouraging growth in both demand and output. To further improve productivity, a training in July 2023 for 80 participants emphasized sustainable farming practices and soil health, alongside the introduction of SIMLUHTAN registration to unlock government support. Future efforts will prioritize financial management, market linkage, and formal group recognition.

Indicator 3.2 Partnerships between community businesses and private sector companies formalised to improve value chains and access markets, by end Y1
Two business agreements were reached between KPH Kayong and the owner of Kopi 101 Pontianak,
1.  KPH Kayong has formalized an agreement with KUPS Ashoka to purchase pandan woven products and market them at the district, provincial, and national levels. (Support Letter from the Ministry of Village, Development, and Transmigration:Surat Pernyataan Dukungan KPH Kayong.pdf)
2.  Kopi 101 has partnered with KUPS LPHD Desa Simpang Keramat Penjalaan to support and assist the community in coffee management. Additionally, if there is sufficient coffee stock availability, 101 will assist KUPS in expanding to the export level. (Support Letter from the Ministry of Village, Development, and Transmigration for 101: Surat Dukungan 101 Coffe house.pdf)

Indicator 3.3 Technical training delivered to at least 500 household representatives (coffee agroforestry production, coffee post-harvest processing, handicraft development and product manufacturing from NTFPs (e.g., rattan, pandan, bamboo) by Y2
By the middle of the second year of program implementation, three technical training sessions had been conducted, covering business plan development and Standard Operating Procedures (SOPs) for community-based enterprises in Penjalaan Village. These activities aimed to enhance technical and managerial capacity in the horticulture sector, non-timber forest product processing (NTFP), and handicrafts. A total of 205 people participated in the entire training series, consisting of 135 men and 70 women from the KUPS Mutiara Agro Lestari, KUPS Tani Makmur, Fajar Atsiri, and KUPS Ashoka groups. On March 6–7, 2024, business plan training was conducted for KUPS Mutiara Agro Lestari and Tani Makmur, attended by 17 participants (10 male, 7 female). On March 7, 2024, similar training for the Fajar Atsiri group involved 14 participants (6 male, 8 female). Then, on March 14–15, 2024, technical training on pandan weaving for KUPS Ashoka was attended by 10 participants (1 male, 9 female), followed by SOP development training on March 25, 2024, involving 10 women. The total number of training participants who have completed the program is 256 participants, or approximately 51% of the target of 500 household representatives.

Indicator 3.4 Training in product development/ value chain development and marketing to four community business groups, with at least 10 participants in each training from each community group, of whom at least 50% are women, by end Y1

On March 6–7, 2024, technical assistance for analyzing feasibility and developing business plans for business groups was conducted in Penjalaan Village. The activity was attended by 19 participants (14 men and 5 women), involving horticulture groups such as KUPS Tani Makmur Simpang Keramat, KUPS Mutiara Agro Lestari, as well as farmer groups Fajar Atsiri and KPH Kayong.

Subsequently, from March 25–27, 2024, further technical assistance focused on the development of Standard Operating Procedures (SOPs) was carried out in the same village. A total of 41 participants (21 women and 20 men) from three business groups—KUPS Ashoka, KUPS Tani Makmur Simpang Keramat, and KUPS Mutiara Agro Lestari—as well as representatives from KPH Kayong, Palung Foundation, and Fauna & Flora participated. These SOPs aim to establish clear performance standards, ensure consistent product quality, enhance group member performance, and facilitate the monitoring and evaluation of business activities.

In addition, business plan training was delivered to KUPS Desa Pemangkat, Madu Lestari of Rantau Panjang, and Kopi Sinar Selatan of Penjalaan, involving 23 participants (12 women and 11 men).

Bookkeeping (financial management) training was also provided to KK Kaet Melayet, attended by 23 participants (4 men and 19 women), while management training was conducted for KTH Sempurna, with 34 participants (26 men and 8 women).

<u>Indicator 3.5 Increased income of community business group members through improved value chains for local products by at least 10% by EoP</u>
Monitoring of product sales from textile business groups (1 group), horticulture (7 groups), coffee (1 group), chips (1 group), and Kelulut honey (1 group). This financial monitoring was conducted over 13 months in business groups that had already started production and participated in financial accounting training. The results of this monitoring showed an increase in income starting in 2023. The increase in income for each group is as follows: Weaving Group 88%, Horticulture 94%, Coffee 13%, while the Chip Group only began producing this year. ([Persentase keuntungan.xlsx](#)).

Increased income of community businesses also stems from better governance and clearer market/value chains (product/value chain and governance/business management), which support sustainable financing (see outcome 0.5). The market chain was improved through several ways for each commodity. Here, the FMU plays an important role in absorbs product and deliver to markets, as below:

– Coffee: the supply chain runs through two main channels. First, through a partnership with the private company, namely 101Coffee (https://www.instagram.com/101coffeehouse/?hl=en), farmers' harvests are directly and sustainably sourced from FMU, then processed and marketed by the company to a wider market. Second, the group also sells coffee to local village shops and through an online platform managed by FMU Kayong. The coffee supply chain includes farmer groups → 101Coffee (industrial absorption) and farmer groups → village shops/KPH (local and online markets).

– Weaving: groups are trained in product design and marketing. Handicraft products made from weaving have two main marketing channels. Products without patterns, such as plain mats, are sold directly by the groups to local consumers, usually neighbours, for daily needs such as funeral mats or rice drying mats. Meanwhile, patterned products such as decorative mats, prayer mats, and bags are marketed through FMU Kayong. FMU acts as an intermediary, facilitating sales to relevant government agencies for exhibitions, as well as managing promotions and online sales through official social media accounts. Thus, the supply chain for woven products runs from the farmer group → FMU Kayong → local consumers (offline and online) or government agencies (through exhibitions).

– Agriculture and horticulture: We assist in the production of organic fertilizer and land clearing without burning, as well as financial management. The group's fresh vegetable production is marketed through a local distribution system. Farmers sell directly to collectors or nearby residents who trade at the village market, and the products are then passed on to end consumers. This channel is still limited to the village level, with the supply chain: farmer group → local collector/market trader → consumer. In the future, there is significant potential for market expansion if production volume and crop quality continue to improve.

**Output 4: Two village forest institutions have secured long-term funding (at least 10 years) for PMU operations to protect village forests and contribute to community wellbeing**

<u>Activity 4.1 Facilitate learning visits and exchanges with Manjau village, which has secured 10 years of performance-based payments for environmental services</u>

This activity aimed to give lessons learned in obtaining and maintaining long-term financing from village forests granted sustainable financing support, and which have secured 10 years funding by performance-based payments for environmental services. The learning visit was carried out by facilitating the LPHD of Penjalaan and Rantau Panjang visiting Manjau village forest, on 15 March 2023, and was attended by total participant 22 people, (19 men, 3 women) members of LPHD Penjalaan, LPHD Rantau Panjang, and LPHD of Manjau. During the discussion, participants of two villages showed interest in long-term funding granted LPHD Manjau, through RaCP scheme, with investors from a palm oil company of PT. DSN. The lesson learned was that they need the third party for Payment for Ecosystem Service scheme, to connect the Village Forest with investors/buyers. As the case of LPHD Manjau, they were helped by CFES who bring PT DSN investment. During the discussion, participant was also made aware benefit sharing mechanisms, FPIC process in any actions including corrective action for occurring leakages/degrading forest.

<u>Activity 4.2 Identification of potential partners/investors for VCS Climate, Community & Biodiversity Standards (VCS-CCB) or RSPO RaCP schemes</u>
The CCB and/or RaCP scheme can be applied under the Social Forestry Scheme, including Village Forest (VF) schemes, that occured in our two targeted areas. Identification of potential investors for long-term funding into several VFs including Penjalaan and Rantau Panjang has been identified following Community & Biodiversity Standards (VCS-CCB) several investors already approached by FFI: Wildlife Works Carbon LLC (WWC), INPEX, SHELL, ØRSTED. The three out of four potential investors I.e., WWC, INPEX and ØRSTED have been conducted Due Diligence and Non-Disclosure Agreement (NDA) with Fauna & Flora (FF). INPEX have conducted field visit to several working sites of Fauna & Flora n West Kalimantan and show interest to invest for FFI's work in Village Forest. For the RSPO RaCP scheme, some private companies were identified (PT.DSN, Wilmar and Pt. Triputra Agro Persada (TPA)). These three companies have collaborated with CFES Institution as a partner of Fauna & Flora to channel funds from RaCP to potential Village Forests initiatives.

## 3.2. Outcome

**0.1. By 2025, the annual deforestation rate in Gunung Palung National Park (GPNP) and adjacent village forests has been reduced by at least 50% compared to pre-pandemic baseline (<u>Baseline:</u> Deforestation rate 0.77% (2018))**

The results of deforestation analysis for the period between March 1, 2024 and March 30, 2025, as shown in Table 3 below, indicate that the largest areas of deforestation in the GPNP and GPNP Buffer Zone were in the Riam Berasap Resort at 1.92 Ha (0.0018%), followed by Tanjung Gunung Resort at 1.42 Ha (0.0013%), Sampurna Resort at 1.04 Ha (0.0010%), Batu Barat Resort at 0.91 Ha (0.0008%), Sedahan Resort at 0.77 Ha (0.0007%), Pangkalan Jehing Resort covering 0.70 hectares (0.0006%), Matan Resort covering 0.60 hectares (0.0006%), while no deforestation occurred in the Penjalaan and Rantau Panjang village forest areas.

Table 3. Forest change cover in National Gunung Palung and its surround area in 2025 (April 2025)

| AOI | Deforestation | | Forest Enchance | | Reforestation | | Remain Forest | | Remain Non Forest | | Degradation | | Total Area (Ha) | Total Percentage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area (Ha) | Percentage | Area (Ha) | Percentage | Area (Ha) | Percentage | Area (Ha) | Percentage | Area (Ha) | Percentage | Area (Ha) | Percentage | | |
| Resort Matan | 0,60 | 0,0006% | 10,09 | 0,0093% | 80,79 | 0,0742% | 21845,81 | 20,0778% | 30,95 | 0,0284% | 22,94 | 0,0211% | 21991,19 | 20,2114% |
| Resort Sedahan | 0,77 | 0,0007% | 473,45 | 0,4351% | 643,52 | 0,5914% | 8474,51 | 7,7887% | 662,72 | 0,6091% | 363,36 | 0,3340% | 10618,34 | 9,7590% |
| Resort Sempurna | 1,04 | 0,0010% | 121,86 | 0,1120% | 429,34 | 0,3946% | 14725,33 | 13,5336% | 210,91 | 0,1938% | 111,00 | 0,1020% | 15599,48 | 14,3370% |
| Resort Batu Barat | 0,91 | 0,0008% | 12,13 | 0,0112% | 324,96 | 0,2987% | 14823,00 | 13,6233% | 265,08 | 0,2436% | 394,06 | 0,3622% | 15820,15 | 14,5398% |
| Resort Pangkal Jihing | 0,70 | 0,0006% | 168,06 | 0,1545% | 844,39 | 0,7760% | 13713,46 | 12,6036% | 324,31 | 0,2981% | 71,43 | 0,0656% | 15122,34 | 13,8985% |
| Resort Pangkal Tapang | 1,92 | 0,0018% | 51,76 | 0,0476% | 193,07 | 0,1774% | 12926,87 | 11,8807% | 100,68 | 0,0925% | 129,31 | 0,1188% | 13403,61 | 12,3188% |
| Resort Tanjung Gunung | 1,42 | 0,0013% | 346,99 | 0,3189% | 260,32 | 0,2392% | 11871,28 | 10,9105% | 304,82 | 0,2801% | 223,28 | 0,2052% | 13008,11 | 11,9553% |
| UP C Panti | 0,16 | 0,0001% | 3,74 | 0,0034% | 35,08 | 0,0322% | 2448,10 | 2,2500% | 11,57 | 0,0106% | 3,29 | 0,0030% | 2501,93 | 2,2994% |
| VF Penjalaan | | 0,0000% | | 0,0000% | | 0,0000% | 329,65 | 0,3030% | 55,33 | 0,0509% | | 0,0000% | 384,98 | 0,3538% |
| VF Rantau Panjang | | 0,0000% | | 0,0000% | | 0,0000% | 326,44 | 0,3000% | 29,33 | 0,0270% | | 0,0000% | 355,77 | 0,3270% |
| Grand Total | 7,54 | 0,0069% | 1188,09 | 1,09% | 2811,46 | 2,58% | 101484,45 | 93,27% | 1995,71 | 1,83% | 1318,66 | 1,21% | 108805,91 | 100,00% |

Table 3 above shows the results of the deforestation analysis conducted at the project site, indicating that no deforestation occurred. Conversely, there was an improvement in forest quality during this period. Compared to previous reports, in general and based on field patrol results, deforestation occurred due to plantation activities and land clearing, such as clearing land for gardens and clearing land for oil palm plantations, with a small portion caused by illegal logging activities.

In small blocks that experienced significant land use change from forest to non-forest, most of the change was from sparse and medium forests to plantations and settlements, particularly in the Tanjung Gunung Resort and Sedahan Resort areas. This can be seen from this year's satellite imagery of deforestation

sites with several land clearings such as roads, indicating that the area has been converted from forest to plantations and settlements. For other deforested areas, land clearing was carried out for land clearing purposes.

In addition to deforestation, an analysis was also conducted to determine the level of reforestation and forest cover increase that occurred from March 2024 to April 2025. The analysis of the GPNP area and the GPNP buffer zone shows changes in vegetation cover in areas that have been cleared/bare land becoming vegetated, which may be due to the growth of grass, plantation crops, or shrubs during this period, as shown in Table 6. The total area is highly significant, covering 186.63 hectares or approximately 0.159% of the total area.

## 0.2. Number of forest crime incidents per year (e.g., illegal logging, hunting of protected species, canal and agricultural encroachment) reduced by 50% compared to baseline, by project end (Forest fire incidents: 238 (of which 150 are in village forests/ buffer zone); Encroachment:195 (2020))

Based on patrol data throughout the project, we have analysed threats in four locations. From this analysis, the area of forest under threat has decreased by between 55.89% and 64.66% compared to baseline data from 2020. This significant decrease suggest that the security and protection measures implemented over the past three years have had a positive impact on the habitat. For further details (see MoV Summary Report Biodiversity.pdf).
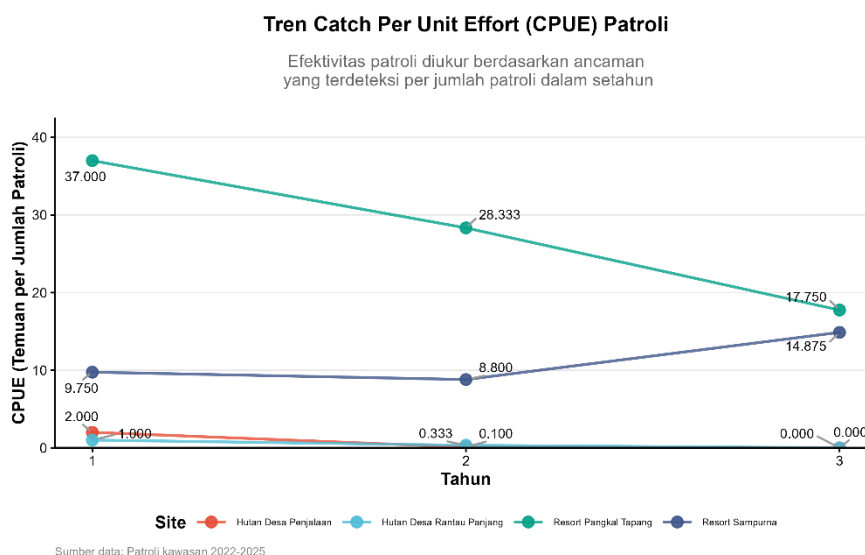


Figure 3. Trend of CPUE calculated by threat's count in 4 project area

The impact of patrols in the area was also tested by analysing the number of findings per unit of effort (CPUE). We calculated CPUE by dividing the number of threats found by the frequency of patrols and the total distance travelled each year. Subsequently, an investigation was conducted to ascertain the correlation between the quantity of findings and the aforementioned two factors. The estimated values were –0.361 for patrol frequency and 0.004 for distance travelled. This indicates that frequency has an inverse relationship with the number of threats. Distance travelled has a direct relationship with the number of threats.

Based on the calculation of catch per unit effort (CPUE) (Fig. 3), the trend of the threat at the management site tends to decline. Based on CPUE patrol frequency, the CPUE index at Pangkal Tapang Resort decreased from 37 (in 2022) to 12.5 (in 2025), at Sampurna Resort from 5.5 (in 2022) to 5.0 (in 2025), in Penjalaan Village Forest from 4 (in 2022) to 0 (in 2025), and in Rantau Panjang Village Forest from 1.75 (in 2022) to 0 (in 2025). It has been indicated that the threat level at forest management sites is influenced by patrol frequency.

## 0.3. Number of fire hotspots reduced, through improved community-based fire prevention, zero burning practices and rewetting of peat swamp forests, compared with baseline by end of project (EoP).

We conducted a hotspot analysis using MODIS C6.1 data over the three years of the project at four target locations. As a comparison, the baseline number of hotspots in 2019 was recorded at 150. In the first year

of the project (2022–2023), the number of hotspots decreased by 84.7% from the baseline. This decline continued in the second year (2023–2024) by 91.3%, and in the third year (2024–2025) reached 96.7% compared to the baseline. This significant decrease is likely influenced by the success of community-level fire prevention agreements and increased adoption of No-Burn Land Clearing (PLTB) practices by horticultural farmers. We have identified 34 individuals from four farmer groups (Rapa Karya Mandiri, Mutiara Agro Lestari, Tani Makmur, and one more from the Mutiara Agro Lestari group) who have begun implementing the PLTB method. To date, the total horticultural land opened using this approach has reached approximately 8 hectares.

## 0.4. At least 75% of women and men from 4 target communities (proportional sample representing 11,223 people) report improvements in multiple indicators of well-being by EoP.

We have conducted a Participatory Wellbeing Assessment (PWA) in 2023 as baseline and 2025 (end year) to four target villages with a total sample of 2,528 households. This assessment was carried out through Focus Group Discussions (FGD) in four target villages, involving 94 participants that involved in this project, including village heads, community leaders, and village chiefs as welfare assessors. The distribution of welfare from the 2023 baseline and monitoring in 2025 can be seen in the table below.

Table 4. Number of people based on welfare status per village

| Location | 2023 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|
| | Poor | Medium | Rich | Total | Poor | Medium | Rich | Total |
| Riam Berasap | 138 | 271 | 104 | 513 | 93 | 274 | 168 | 535 |
| Rantau Panjang | 292 | 380 | 203 | 875 | 252 | 506 | 229 | 987 |
| Penjalaan | 45 | 465 | 54 | 564 | 105 | 446 | 44 | 595 |
| Sampurna | 203 | 190 | 33 | 426 | 133 | 224 | 54 | 411 |
| Total | 678 | 1306 | 394 | 2378 | 583 | 1450 | 495 | 2528 |

The Participatory Wellbeing Assessment conducted across four villages—Riam Berasap, Rantau Panjang, Penjalaan, and Sampurna—revealed an overall improvement in community wellbeing levels between 2023 and 2024. The assessment categorized respondents into Low Income, Middle Income, and Well-off groups, with increased respondent numbers in 2024 contributing to a more inclusive and representative dataset. Three villages—Riam Berasap, Sampurna, and Rantau Panjang—showed clear positive trends, particularly through reductions in the Low-Income category and rises in the Middle or Well-off categories.

In Riam Berasap Jaya, low-Income residents declined from 26.9% to 17.4%, while the Well-off group rose significantly from 20.3% to 31.4%. Sampurna experienced a similar shift, with the Low-Income group falling from 47.7% to 32.4%, and the Well-off group nearly doubling from 7.8% to 13.1%. Rantau Panjang also showed steady progress, with a decrease in the Low-Income group (from 33.4% to 25.5%) and a rise in the Middle-Income group. These changes suggest that livelihood interventions and community engagement strategies have had a measurable positive impact.

In contrast, Penjalaan Village saw a decline in wellbeing indicators. The Low-Income population more than doubled from 8% to 17.6%, while the Middle and Well-off categories both dropped. This reversal may be linked to the expanded survey reach in 2024, capturing more vulnerable households previously unrepresented, or to real economic challenges affecting existing groups. These findings highlight the importance of localized support and monitoring to address specific village-level setbacks, while also demonstrating the value of participatory assessment in capturing nuanced wellbeing dynamics for informed planning.

## 0.5. At least 6 community business groups and village institutions (≥3000 people from 500HH) have new access to sustainable financing (PES, biodiversity offsets) or benefit from improved product value chains, as a result of this project, by EoP

In the management of Village Forests in Rantau Panjang, Penjalaan, Sempurna, and Riam Berasap villages, there are 2 Village Forest Management Institutions (LPHDs), 8 Social Forestry Business Groups (KUPS), and 13 Farmer Groups actively involved. Over the past three years, a total of **514 individuals (representing HH)** have participated in the Darwin project, consisting of **322 men (63%)** and **187 women**

**(37%)**. The involvement of women across these groups reflects efforts to promote more inclusive community-based forest management. see List Group got Benefit From Project.xlsx

## 0.6. Population of orangutans and other threatened target species are stable or increasing in project area, at the end of project, compared to baselines

The orangutan population is defined as stable through monitoring at four project sites. In VF Rantau Panjang, there are 2 to 3 individuals, in VF Penjalaan, there are 2 to 6 individuals, in Pangkal Tapang Resort, there are 137 to 167 individuals, and in Sampurna, there are 35 to 45 individuals. Population estimates are calculated by multiplying the population size by the area of each management site (Sampurna = 156.04 km², Pangkal Tapang = 134.08 km², Penjalaan = 3.76 km², and Rantau Panjang = 3.49 km²). The decline in orangutan population in the third year is suspected due the non-fruit-bearing season during monitoring. Food availability at the monitoring sites was insufficient. See the estimated population of Bornean Orangutans in the MoV Summary Report Biodiversity.pdf for details.

Based on information from Gunung Palung National Park, the orangutan population in Gunung Palung National Park and its surroundings in 2019-2020 was estimated at 2,440 individuals. Meanwhile, Johnson et al. (2005) stated that the orangutan population in Gunung Palung National Park and its surroundings was 2,470 individuals. We also attempted to calculate the estimation of orangutan population within project areas using available data from we have gathered by this project to determine the orangutan population in Kalimantan for buffer zone of Gunung Palung National Park. We calculated using R Studio software with Distance R package through 88 sample data. Kita menggunakan nilai r = 1,16 dan p = 0,89, dan t = 272 (Johnson, 2005).

The model used is a cosine-half normal combination model, which is the best model from the combination of models that we calculated. The orangutan density was estimated at 0.87 - 1.4 ind/km square and highest population is 1,519 individuals (lower-upper: 794 - 2,904 ind; CV: 0.34 or 34%; CI: 95%) in Year 2 monitoring. This variability is 34% which relatively high and its estimation was not sufficiently precise. Insufficient sampling of Gunung Palung NP necessitates collaborative orangutan monitoring with other Gunung Palung NP partners. Gunung Palung National Park should compile orangutan data and habitat management impact regularly. A partner data aggregation meeting occurred on May 2, 2025. Integrated management is crucial for habitat protection and ecosystem values. Uniformity among managers, partners, and the community is key.

Beside Bornean Orangutan, this project also successfully detected other 32 Rare, Threatened and Endangerd (RTE) species, including Sunda Pangoline (*Manis javanica*), Bornean Gibbons *(Hylobates albibarbis)*, *Gonystylus bancanus*, and *Dipterocarpus coriaceus* (see Summary Report Biodiversity.pdf table 6.). Sunda pangolins and Bornean Gibbons are target species selected by the management. Relative abundance values of both species in the management area were defined. The Sunda pangolin demonstrated an occurrence of 0.27 per $Km^2$ in the VF Penjalaan and Rantau Panjang. The Bornean gibbon population density was 0.23 groups per $Km^2$ at the Sampurna resort and 0.31 groups per $Km^2$ at VF Penjalaan and Rantau Panjang.

## 0.7. 50% of households trained (est. 250 HH) will benefit from an increase of 20% production compared to the baseline, as a result of implemented technical trainings

The total number of group members is 514 households, all of whom have received technical training, either through this project or from other project sources such as Fauna & Flora, Palung Foundation, and government agencies such as the village government and the Agriculture and Food Department. To date, approximately 240 households, or about 51% of the total members, are actively involved in the group and are practising the results of the training. As a result of these trainings, income has increased from 2023 as the baseline year, and monitoring of business outcomes will be conducted in 2024–2025. From the monitoring results, improvements in business outcomes can be observed, such as an 88% increase in mat weaving, 94% in horticulture, 13% in coffee, and a new product, chips, produced this year.

### 3.3. Monitoring of assumptions

**Assumptions of Outcome:**
Assumption 1: Catastrophic events, such as El Niño droughts, do not cause large scale un-controllable fire event
Comments: This still hold true, there are El Nino happened during August – September 2023 and causing big fires in some areas, but not in a large scale like happened in 2017 and 2019. Our project areas remain safe from big fires.
Assumption 2: Government regulations remain supportive of environmental services markets

Comments: The assumption remains applied. There are new regulations that support the National environmental market services, i.e. No. of 2023 on forestry sector carbon trading mechanism. The regulation is supportive to the implementation of environmental services markets but slightly affecting the procedures where all voluntary carbon markets under forestry should proceed through national registry via the government bodies. Hence, this regulation will be affecting the achievement of output 4 and the outcome regarding the sustainable financing through PES schemes. Our mitigation is changing the procedure into National Registry System and will proceed effectively by Y3. (*see explanation in output 4 section 3.2.*)

Assumption 3: Continuous commitment by GPNP and local community partners

Comments: Commitment remains continues from GPNP even though there is an issue with the continuation process of MoU between Fauna & Flora and the MoEF. The commitment from communities also remain continues.

Assumption 4: There are no significant new outbreaks of disease among target species that cause unprecedented losses

Comments: There are no new outbreaks of disease to targeted species causing unprecedented losses. However, the assumption still holds true, hence there are no mitigation strategy are needed.

## **Assumption of Output 1**

Assumption 1: The targeted community groups remain committed to join PMUs

Comments: No change on this assumption and still hold true, where the PMU team remains same and operating accordingly.

Assumption 2: FFI's Memorandum of Understanding with GPNP remains in place.

Comments: Recently, Fauna & Flora are under the process of continuation of MoU with the MoEF were affecting the direct command to GPNP (as a local agent of MoEF). Some activities operating within GPNP areas are postponed, e.g. patrols. However, other activities remain continues as we have anticipated by operating the PMU in adjacent GPNP areas (within PMU operational areas) while waiting the MoU process.

Assumption 3: Regulation and policy changes will not impact the conservation partnership agreement between community and GPNP agency

Comments: No change and still hold true

Assumption 4: Trainer community members and GPNP rangers remain healthy and able to complete patrols as intended

Comments: No change and still hold true. The patrol activities remain continues in place in well performances.

Assumption 5: Local fire management authorities (Manggala Agni) and law enforcement agencies (GAKUM/ police) respond to PMU reports.

Comments: No change and still hold true. The local Police department responded to PMU's report and joining the joint patrol for law enforcement in Penjalaan Forest Village. Meanwhile, the PMU on peatlands has recorded some fire sign in their operational areas but found no significant threats from fires. Hence, this finding was not necessarily reports to Manggala Agni. The annual fires finding will be report to Manggala Agni by the end of this year (calendar period).

## **Assumptions of Output 2**

Assumption 1: No El Niño event causing large-scale devastating fires during project period

Comments: No change and still hold true, since there is no significant effect from El Nino to project areas.

Assumption 2: Local fire management authority (Manggala Agni) responds to community reports.

Comments: No change and still hold true. Coordination with Manggala Agni will be engaged if there are significant threats of fires to the forest, in collaborating with FMU, village government and LPHD in suppressing the fires.

## **Assumption of Output 4**

Assumption 5: Government regulatory framework allows to access national or international carbon markets

Comments: No change and still hold true. By the new regulation, the National and International market are accessible following National Standard Registry (SRN), of which proposed by each land managers (LPHD) by filling the Document of Mitigation Action Plan (DRAM).

Assumption 6: RSPO palm oil companies are willing to compensate their liabilities for past High Conservation Value (HCV) clearing through village forest programme in target villages

Comments: The assumption remain applicable but needs to be fit with the new regulation that ensure that compensation from RSPO companies are also possible through SRN mechanism. However, the assumption also may change in the future, in respond to the new regulation regarding national Environment

Services markets if the compensation mechanism is not facilitated yet by the regulation. We have option to follow the new regulation in national, where it is the most possible to access and support government in securing sustainable financing for communities by protecting forest.

## 3.4. Impact

Original impact: Biodiversity, including orangutan and other threatened species, is thriving in and around Gunung Palung National Park (West Kalimantan, Indonesia), supported by strengthened local institutions, long-term financing and improved community livelihoods.

Impact pathways:
The project delivers positive changes to improve biodiversity in and around GPNP, incl. Orangutan were shown thriving, its population tend to be stable or progressing during project (see output 1). This is also due to a reduction in threats compared to initial conditions thanks to patrol activities and fire mitigation efforts in peatlands. The rate of threats have been reduced by 55.89% to 64.66% from the 2020 baseline. It has also been reduced by 23.17% to 32.96% from the first year of the project. The positive change from these results is the better forest condition and biodiversity, of which shown progressing in reducing deforestation rate and stable species population. This is in line with our original desired impact from the project.

By the established fires mitigation action in peatland areas, the villagers are aware and willing to adopt the zero-burning practice in preparing their farmland (see output 2.1). This is in turn reducing the risk to fires along the project life (see outcome indicator 0.3). This positive change in knowledge and practice are led to shift their behaviour from unsustainable slash-and-burn into forest-friendly practices which strengthening their resilient to climate disaster. Combined with rewetting on peatland and forest restoration of approximately 197Ha of village forest in the upstream, help in reduced fires up to 96.7% in downstream and provide better habitat for biodiversity in the forest as well as preserves community's natural assets.

An increased livelihoods from forest product for villages (output 4) providing additional motivation for further PMUs operation in forest protection as local people benefit from standing forests. The combination of monitoring and management, restoration and ecosystem recovery, safe and legal sustainable livelihoods, and new financial flows has led to endured changes in knowledge and practice that contribute to a significant decrease in the rate of biodiversity and habitat loss in GPNP and the adjacent village forests. Through the impact above, the project is contributed to 2 targets of Indonesia's NDCs, 5 national targets on IBSAP biodiversity and 5 of SDG targets.

# 4. Contribution to Darwin Initiative Programme Objectives

## 4.1. Project support to the Conventions, Treaties or Agreements

We have informed our contribution from projects and give input to National reporting of IBSAP (Indonesia Biodiversity Strategy and Action Plan 2025-2045) led by the Ministry of Environment of Republic of Indonesia. The Natrep committee will contribute to national reporting of KM-GBF and SDG from Indonesia. The project supporting contribution to any conventions and treaties but has not been submitted yet to the respective focal points (will be made under the organisations along with other project results). Some of them are as below:

- The Indonesia Nationally Determined Contribution (NDC) [REF-13] conditional reduction target (up to 41% of the business-as-usual scenario, by 2030) by reducing emissions from deforestation and fire, with support from the UK government. It specifically supports the delivery of two NDC programmes for climate change mitigation:
  **2,** Capacity building of institutions, to prevent and control fires (mitigation actions). We have supported the capacity building to institutions i.e. GPNP, LDPHD, FMU, village government, Local Police and Village armies, as well as Local NGO in mitigating fires on peat lands, through output 2.1, 2.2. **6,** Developing and implementing an intervention programme for climate change mitigation in the sector of forestry, linked to agriculture. Beside point 2 above, our intervention also supports mitigation of climate change to help forestry and agriculture by establishing 7 canals blocking to control peat hydrology, of which aimed to rewetting the peat forest as well as help in regulating the water table in community's farm-land areas.
- Indonesia national targets under the CBD, including target number (in bold):
  **11**, through sustainable management of Gunung Palung National Park and buffer, reflected in improved GPNP METT score, from 76 in 2021 to 83 in 2024. (Lampiran SK. METT 2023.png). **12**, through efforts to maintain the population of orangutan and other endangered species through habitat conservation, threat reduction through joint patrols, alternative livelihoods, fire

management, and biomonitoring. Such efforts have been conducted by Y2 were as (1) Orangutan Monitoring and Other threatened species (Bornean Gibbon and Sunda Pangolin), (2) regular SMART Patrol and (3) Joint patrol for law enforcement. These interventions contribute to the reduction of threats by Y2 (see outcome 6). **14**, improved functionality of the ecosystem, supporting multiple ecosystem services, through protection and re-wetting of peat swamp, canal blocking to restore the water table, and replanting. **15**, through conservation of the lowland and peat swamp forest ecosystems, including through rewetting and canal blocking, and through effective collaborative management. **21**, through establishing systematic information gathering on biodiversity through joint SMART patrols.

- Multiple Sustainable Development Goals, the most significant include targets of:

  **1**, Building the resilience of two remote village communities to climate-related shocks (fires) through output 2 (**1.5**) and supporting their access to economic resources, including GPNP buffer zone natural resources through output 3 (**1.4**). **8**, Decoupling economic growth from environmental degradation by enabling legal, safe livelihoods options in the GPNP buffer zone for >3,000 people represented by 514 members of four community business groups, through output 3 (**8.4**). **11**, Reducing the number of people affected by, and who suffer losses to, disasters, including extensive forest fires (**11.5**). **12**, Enabling more sustainable use of natural resources (**12.2**) through the reduction in illegal logging through alternative livelihoods, deterrents, and fire prevention actions. **15**, Supporting the conservation (**15.1**) and management (**15.2**) of lowland and peat swamp forest ecosystems, through improved management of GPNP, with resulting direct contributions to halt biodiversity loss (**15.5** including orangutan and other endangered species, and to reducing poaching of fauna (**15.7**) by reducing illegal logging.

## 4.2. Project support for multidimensional poverty reduction

This project has directly contributed to poverty reduction in four target villages. According to PWA result, it has shown the poor number has reduced approximately 14% along 3 years from 2022 to 2025, especially in 3 villages namely Rantau Panjang, Sampurna and Riam Berasap. The wellbeing has improved toward targeted communities as our beneficiaries, by improved business management and production, where 514 HH from 22 business groups has increased their income more than 20%, as expected by the project (see outcome 0.4 and 0.7). The significant increase has happened in one woven group and seven horticulture groups which reaching 80% (from IDR 2 million in 2023-2024 to 18 million in 2024-2025) and 94% (from IDR 17s million in 2023-2024 to IDR 313s million in 2024-2025) respectively (see Bussiness Plan And SOP)

The poverty reduction has also shown progressing from better management and practices in community's livelihood. The advanced business practices as result from training and assistances as well as the clear value/market chains for the product has led to increase productions and market absorbances (see output 3.4, 3.5), thanks to the essential roles of FMU in market chain. In particular, the zero-burning practices for land preparation has increased against slash-and-burn practices in Penjalaan and Rantau Panjang villages. Whilst village regulation support zero-burning practice, about 34 farmers from 4 horticulture groups has applying this practice to open around 8-Ha land areas without burns. This shift practices against long behaviours ensure the sustainable in land management, which at least support community's resilient from fires (see output 2.1) and in turns strengthen food security and economics.

## 4.3. Gender Equality and Social Inclusion (GESI)

| GESI Scale | Description | Put X where you think your project is on the scale |
|---|---|---|
| **Not yet sensitive** | The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach | |
| **Sensitive** | The GESI context has been considered, and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and | X<br><br>GESI-Ambition Level-Darwin F.xlsx |

| GESI Scale | Description | Put X where you think your project is on the scale |
|---|---|---|
| | marginalised groups, and the project will not contribute to or create further inequalities. | |
| **Empowering** | The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups | |
| **Transformative** | The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change | |

The project integrated Gender Equality and Social Inclusion (GESI) considerations across its design and implementation by addressing legal rights, cultural norms, roles, and representation. It identified and responded to gender-based disparities in access to land, resources, and participation. Women were actively involved in forest management groups, livelihood enterprises, and community planning, with participation reaching 37%, exceeding national targets. Activities were designed based on gendered labor calendars to ensure women's time and responsibilities were respected, and targeted support was provided through training, tools, and access to productive resources.

Over the past year, key challenges included cultural resistance to GESI integration, limited institutional capacity, and persistent male dominance in decision-making. However, the project made progress by embedding GESI into forest and livelihood planning and adapting its approach to empower women and marginalized groups through inclusive participation, leadership opportunities, and tailored livelihood support. These efforts have improved both social outcomes and conservation effectiveness. See GESI Analisys Darwin Project.docx

## 4.4. Transfer of knowledge

Knowledge transfer is one of the main components of this project. We have trained three people to conduct bachelor-level research studies, including two on orangutan populations as researcher (Penjalaan and Rantau Panjang VF) and one on carbon reserve value in Rantau Panjang VF. This research has resulted in two journals that have been published in the UNTAN Journal. Furthermore, this initiative effectively instructed technical staff in various subjects, such as area patrols, biodiversity monitoring (including orangutan populations), and the utilization of camera traps. A minimum of 30 individuals participated in this training across the following locations: VF Penjalaan, VF Rantau Panjang, KPH Kayong Utara, Gunung Palung National Park, and the Palung Foundation. Three staff members from Gunung Palung National Park also presented further details on the use of the SMART Desktop application and GIS specialist involvement.

## 4.5. Capacity building

- Three in-country staff and partners increased their capacity. They did so by participating in an international conference of the Asian Primate Symposium, 23-27 November 2024. Two Fauna&Flora staff members (1M: 1W) and one GPNP agency staff member (a man) presented three papers, two of which presented results from GPNP areas supported by this project. As part of this initiative, a staff member of the Fauna & Flora program in West Kalimantan, Tutus Dwi Ageng, was assigned and specifically requested to provide SMART Desktop analysis training by the West Kalimantan BKSDA at the provincial level with 50 BKSDA staff participants (37 male and 13 female). Additionally, three training sessions on the SMART Patrol data model and forest fire monitoring using the SMART Patrol application were conducted for staff from the West Kalimantan Provincial Environment and Forestry Department (DLHK).

## 5. Monitoring and evaluation

We have developed Monitoring and Evaluation (M&E) system on M&E matrix to measure output and achievements that contribute to the project outcome. The matrix is attached in separated document to this

report (please find the file OK_M&E FORM DAR2 Y3.xlsx as attachment to this report). There is no specific M&E works from each partner during this Y2 reporting period, but we have collected information from other partners to be incorporated in the project M&E and this report. We also agree to additional submit M&E report to all partners including GPNP agency, Yayasan Palung, and 4 assisted villages to ensure they are up to date on overall project progress.

## 6. Lessons learnt

Overall, the project went well and according to plan with slight changes, yet the overall outputs and outcomes remains achieved.

- <u>What Worked Well</u>
1. Joint Patrols & PMU Establishment: Effective in reducing illegal logging, poaching, and fire threats. Patrol evaluation contributed to performance improvements and better data management. Decreased forest fire incidents from 150 (2019) to 12 (2023).
2. Peatland Restoration: Canal blocking and water table management proved effective in reducing peatland fires. Villages welcomed rewetting measures, recognizing long-term fire prevention benefits.
3. Community Empowerment: Social entrepreneurship training and product development improved income options. Ex-loggers shifted to horticulture and other biodiversity-friendly livelihoods.
4. Monitoring & Adaptive Management: Quarterly patrol evaluations and SMART system helped track and adjust strategy. Citizen science approaches suggested for species monitoring.
- <u>Challenges and What Didn't Work Well</u>
1. Behavioural Change in Slash-and-Burn Practices: Adoption of zero-burning land preparation is still limited. Farmers find traditional burning methods easier and more efficient. Changing long-standing practices remains slow despite training and regulation.
2. Business Group Capacity: Many KUPS (community business groups) still struggle with: Weak internal management, Poor gender balance, Limited market access, Low product quality, quantity, and continuity, Business plans and SOPs developed, but implementation remains uneven.
3. Species Monitoring: Monitoring of Sunda pangolins and rare species through traditional methods is insufficient. Lack of sightings despite known presence by locals indicates need for new methods.
4. Institutional Sustainability: Market-based financing (e.g. carbon offsets) remains difficult for small village forests due to scale and bureaucracy, Carbon scheme access is complex, and dependent on changing regulations (e.g., PermenLHK No.7/2023).
- <u>If Doing Again, Would Do Differently</u>
1. Establish behavioral incentive models earlier to encourage zero-burning practices.
2. Integrate youth groups and women from the outset, including in mixed patrols and leadership roles.
3. Strengthen business development before scaling to market engagement.
4. Plan for more long-term mentoring in business management and bookkeeping.
5. Build local capacity for biodiversity monitoring using citizen science, especially for elusive species.
- <u>Recommendations for Future Similar Projects</u>
1. On Technical Implementation: Use quarterly evaluations for patrols and adaptive M&E., Combine ecological restoration (e.g., ANR, canal blocking) with active community roles. Use GIS & remote sensing tools in real-time with community validation.
2. On Livelihood Development: Ensure sustained business mentoring beyond initial training. Emphasize product quality assurance and consistency before scaling to markets, Facilitate market linkage agreements earlier in project timelines.
3. On GESI and Inclusion: Offer gender-targeted training sessions and monitor disaggregated participation., Develop leadership roles for women and youth in village institutions, consider barriers to inclusion (e.g., timing, distance, cultural roles) when planning engagement.
4. On Sustainable Financing: Factor in the timeline needed to access carbon or PES markets start early, build documentation, Explore national PES systems and smaller-scale community financing alternatives (e.g. FMU-linked sales, district budget allocations).
5. Monitoring & Evaluation: Integrate citizen science-based biodiversity tracking, especially for hard-to-monitor species, Link M&E outputs directly to project adjustments and community learning.

## 7. Actions taken in response to Annual Report reviews

All partners have had opportunity to provide input for this final report during our steering committees workshop on February 2025. We received seven comments on our last annual report that required a resposes as below:

| Reviewer comments | Feedback | Action |
|---|---|---|
| *The project has not explicitly considered the extent to which measured impacts can be attributed to project activities. Establishing clearer causal links between activities and impacts would strengthen the project's ability to demonstrate its effectiveness.* | Noted. Considering the number of activities we had and limited pages on reporting, hence we were limited our documentation on activities. However, while we are focused to report more on outputs, we also tried to linked activities to outcome/impact. | In this report, we keep trying to describe the causal path of activities to impact explicitly as much as possible by mentioning method (some of which are activities) on each output and outcome, as well as in describing impact. |
| *Does the project have any involvement with the CBD and CITES focal points for Indonesia?* | The Indonesia focal points of the CBD and CITES has no involvement by this project, however we have remains good communications with them (BRIN and The MoF) as the CITES focal points for Indonesia as the management authority. | No further action was taken. However, on every meeting with the gov focal points for any treaties, we keep trying to communicate our results from this project or as share or inform the results to them as necessary. |
| *The project should report against all relevant conventions and treaties in reporting to demonstrate the wide-ranging impacts of its work.* | Noted. We are aware that our results from this project have valuable contribution into conventions and treaties. We seek a link to report our result to government focal points, but not all has reached. | In May 2025, Fauna & Flora was involved in National Reporting of IBSAP preparation and reports our contribution to some targets. |
| *In the response to last year's review, the project notes 'In National level, as part of supporting the NBSAP, MoF have been initiated National Inventory and Verification (INVER) for key wildlife species (animal and plants). All the raw data findings will be synchronised through SIDAK portal of KSDAE. Is the project able to provide more detail on this process, and the mechanisms by and through which it will provide support?* | The involvement of this project to the process of INVER was only providing findings data or information gained from the project relevant to IBSAP in support Indonesia national targets. We did not support the mechanism that were all organized and prep by the government. | No further action was taken. However, we keep support data for GPNP agency in site as representative of MoF. |
| *AR1 reported £6,500 worth of match funding mobilised to date, with potential for an additional £35,000 total finance mobilised by new activities, however this AR2 has listed no match funding throughout the project lifetime.* | Yes. We have recalculated the budget for Y2 project implementation as well as to achieving the delayed outputs. | No further action for Y2 project. We continued to proceed Y3 project implementation. |
| *The project does not explicitly reference the specific GESI context in which it operates, and should do so in this section of reporting in the next AR. The number of women on the project board has also not been reported. Including this information and setting clear targets for improving women's representation is crucial.* | Noted. We were aware that we missed the specific GESI reference for our AR2. | By this final reporting we conducted a simple post-project GESI assessment towards this project. The results briefly documented in point 4.3, with an attachment to the analysis report. |
| *The reviewer encourages the project to also consider political, economic, social,* | Noted. | |

| technological and legal risks, as well as environmental. | | |
|---|---|---|

## 8. Risk Management

There are no significant new risks arisen in the last 12 months and hence there are no specific adaptations to the project design in addressing new risks. For the overall risk management, we have updated our risk registry form for 3 years along the life project, which be seen in the following link: [2023-BCF-ref-29-002-Risk-Registry.xlsx](#)

## 9. Scalability and Durability

This collaborative project has intention to upscale the initiatives into the overall GPNP buffer villages and adjacent areas, in particular in coastal peat areas that needs more attention. The scale up also includes establishing more PMUs and opening wider access to sustainable financing, strengthening climate resilience by continuing and replicating ecosystem recovery especially peatlands in broader areas. This is expected to deliver wider and bigger impact within the region for much more people in Kayong Utara Regency and Ketapang, including support food security, thriving biodiversity, and reduce poverty by improve wellbeing in multiple indicators.

Yayasan Palung as our main partners will continue and adopt similar project activities, which has incorporated in their project planning. Thorough Darwin Initiative project 2025-2027, YP has continues this initiative for at least 3 years ahead in wider areas assisting up to 8 villages near the existing project areas (i.e., Rantau Panjang, Penjalaan, Nipah Kuning, Pemangkat, Pulau Kumbang, Padu Banjar, Matan Jaya, and Lubuk Batu), Kayong Utara sub district. This includes, to continue restoration monitoring on peatlands by their assisted village forest managers, zero-burning practices, and monitor community enterprises. Besides, we are tending to upscaling in wider landscape covering all surrounding villages as a total buffer area to GPNP.

We are aware that this initiative requires a long-time period to achieve its desired impact. Through the combination of this Darwin Main and continued by YP's Darwin Initiative project, the basic elements to create the impact will be sufficiently strong, where knowledge and capability including behaviour of stakeholders are met with the requirement for at least in existing intervention areas.

## 10. Darwin Initiative identity

All project activities with communities, partners and government stakeholders convey that the activities are supported by the Darwin Initiative, including training materials and workshops resources feature the Darwin Initiative logo. FFI-West Kalimantan acknowledges Darwin Initiative funding as a distinct project with a clear identity. In the MoU between FFI and the Directorate General for Nature Resources and Ecosystem Conservation –KSDAE, and the MoU between FFI-West Kalimantan and GPNP Agency, it is clearly stated that the project is supported by the Darwin Initiative the funding involved, and that the funding must be spent in accordance with the Program Implementation Plan and award guidelines.

## 11. Safeguarding

## 12. Finance and administration

## 12.1. Project expenditure

| Current Year's Costs | Agreed Annual Budget (£) | Total Actual BCFs Costs (£) | Variance % | Comments (please explain any variance) |
|---|---|---|---|---|
| Staff costs | | | | |
| Consultancy Costs | | | | |
| Overhead Costs | | | | |
| Travel and subsistence | | | | |
| Operating Costs | | | | |
| Capital items | | | | |
| Others | | | | |
| Audit costs | | | | |
| **Total** | £111.305,00 | | | |

## 12.2. Additional funds or in-kind contributions secured

| Matched funding leveraged by the partners to deliver the project | Total (£) |
|---|---|
| Rainforest Trust | |
| | |
| | |
| | |
| | |
| **TOTAL** | |

| Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project | Total (£) |
|---|---|
| | |
| | |
| | |
| | |
| | |
| **TOTAL** | |

## 12.3. Value for Money

The funds are used efficiently with the proposed expenditure plan. The grant allocated resulted in a tremendous impact on the local community's improvement, in line with conservation effort. Some of the lessons learned from the project to improve efficiency include:

- We placed staff mostly in place close to the working site, to reduce travel expenses along the project.

- Employees are Indonesian people who have good language skills. There is also mostly West Kalimantan staffs that can facilitate delivering substantial value to the community. Moreover, some staffs have good English skills in email correspondence and reporting. So that it can reduced translator costs and it is effortless to adapt and blend in with the target community in villages.
- We conducted preliminary research related to the social conditions of the local community, consulted with the local government, Gunung Palung National park, Forest Management Unit and Yayasan Palung who have been working in the specific site for a long time to get input in carrying out the best programme with an approach that suits the character of the local community.
- We objectively evaluate the programme implementation annually to identify obstacles and rearrange planning based on the framework. Progressively developed some improvement with the right approach to find the best solution.
- With a co-management scheme, all the partners include the GPNP agency, Yayasan Palung and FMU can achieve maximum outputs with efficient use of funds.
- All procurement of goods and services is conducted in accordance with Fauna & Flora Procurement Policy and Procedures, ensuring value for money through competitive bidding and transparent supplier selection.

To ensure sustainable community economic development, we invest small grants for alternative livelihoods activities. This support based on the needs of the beneficiary encourages the efficient utilization. This is quite successful in generating a scale of economy from a household to a village level.

## 13. Other comments on progress not covered elsewhere

N/A

## 14. OPTIONAL: Outstanding achievements of your project (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

| File Type (Image / Video / Graphic) | File Name or File Location | Caption, country and credit | Online accounts to be tagged (leave blank if none) | Consent of subjects received (delete as necessary) |
|---|---|---|---|---|
| | | | | Yes / No |
| | | | | Yes / No |
| | | | | Yes / No |
| | | | | Yes / No |
| | | | | Yes / No |

# Annex 1 Report of progress and achievements against logframe for the life of the project

| Project summary | Progress and achievements |
|---|---|
| **Impact**<br><br>Biodiversity, including orangutan and other threatened species, is thriving in and around Gunung Palung National Park (West Kalimantan, Indonesia), supported by strengthened local institutions, long-term financing and improved community livelihoods. | The orangutan population tends to be stable, that is 2440 in Gunung Palung NP and around by Gunung Palung National Park updated. From our assessment, density range of Bornean Orangutan in the buffer zone of Gunung Palung over the past three years (monitoring once per year), the density range of Bornean orangutans is 0.87 - 1.4 ind/km square (See in output 1). This project also contributes to the habitat of rare, endangered, and endemic (RTE) species that the state protects. Throughout this project, we successfully detected 32 RTE species, including *Pongo pygmaeus*, *Manis javanica*, *Gonystylus bancanus*, and *Dipterocarpus coriaceus* (see Summary Report Biodiversity.pdf table 6.).<br><br>Sunda pangolins and Bornean Gibbons are target species selected by the management. From this project, we successfully defined the relative abundance values of both species in the management area. The Sunda pangolin demonstrated an occurrence of 0.27 in the VF Penjalaan and Rantau Panjang management areas. The Bornean gibbon population density was 0.23 groups per square kilometer at the Sampurna resort and 0.31 groups per square kilometer at VF Penjalaan and Rantau Panjang.<br><br>Awareness has been raised through various conservation activities, including protection and security of forest areas. The community has gained a better understanding of how actions that damage forest areas can disrupt ecosystems and wildlife habitats. Poaching and illegal logging have decreased. |
| **Outcome**<br><br>The Gunung Palung National Park and adjacent village forests are under improved protection and sustainable use through collaborative patrolling, effective fire prevention, and biodiversity-friendly livelihoods. | |
| Outcome indicator 0.1<br><br>By 2025, the annual deforestation rate in Gunung Palung National Park (GPNP) and adjacent village forests has been reduced by at least 50% compared to pre-pandemic baseline. | The total deforestation within AOI amounting to 7.54 ha or 0.0069% of the total GPNP and village forest area. This deforestation was significantly reduced compared to baseline of 0.77%. It means the deforestation rate has reduced about 99.1% or more than 50% during the project. |
| Outcome indicator 0.2,<br><br>Number of forest crime incidents per year (e.g. illegal logging, hunting of protected species, canal and agricultural encroachment) reduced by 50% compared to baseline, by project end. | The number of forest crime incidents decreased by 64.66% compared to the baseline. The trend of forest crime incidents is clearly in decline, as shown by CPUE (Catch Per Unit Effort) analysis (see output 1.). Not a single incident of forest crime was identified in the Penjalaan and Rantau Panjang VF site. |

| Outcome indicator 0.3,<br><br>Number of fire hotspots reduced, through improved community-based fire prevention, zero burning practices and rewetting of peat swamp forests, compared with baseline by end of project (EoP). | During the project's inception, satellite analysis using NOAA's MODIS hotspot technology has revealed a decrease ranging from 39.13% to 78.26%. A decrease has been seen in the number of hotspots from 22 to 5 hotspot (MODIS/NOAA). Compared to the 2019 baseline data, the number of hotspots decreased by 96.17%. These results have positively impacted the history of fires. Various activities have raised public awareness and encouraged more caution when clearing land for agriculture. Consequently, the number of hotspots detected in the project area is no longer as high as before. |
|---|---|
| Outcome indicator 0.4,<br><br>At least 75% of women and men from 4 target communities (proportional sample representing 11,223 people) report improvements in multiple indicators of well-being by EoP. | The results of the 2024 Participatory Wellbeing Assessment in four villages show an improvement in wellbeing in Riam Berasap, Rantau Panjang, and Sampurna, marked by a decrease in the number of low-income residents and an increase in the middle and high-income categories. In Riam Berasap, the low category fell from 26.9% to 17.4%, and the high category rose from 20.3% to 31.4%. In Sampurna, the low category decreased from 47.7% to 32.4%, the middle category increased from 44.6% to 54.5%, and the high category increased from 7.8% to 13.1%. Rantau Panjang also recorded a decrease in the low category from 33.4% to 25.5%. Conversely, Penjalaan experienced a decline in welfare, with the low category increasing from 8% to 17.6% and decreases in the other two categories. The increase in the number of respondents further strengthens the validity of the data. |
| Outcome indicator 0.5,<br><br>At least 6 community business groups and village institutions (≥3000 people from 500HH) have new access to sustainable financing (PES, biodiversity offsets) or benefit from improved product value chains, as a result of this project, by EoP | A total of 22 community groups representing 461 households have gained new access to sustainable financing. Most of these are 20 rural business groups that have seen improvements in their product value chains, including commodities such as coffee, stingless honey, banana chips, handicrafts, non-timber forest products (such as rubber), horticulture, fish cages, and lemongrass oil production. Additionally, two Village Forest Management Institutions (LPHD) from Rantau Panjang and Penjalaan have successfully accessed the National Registration Standards for the carbon market, expanding sustainability opportunities and economic potential for the villages. |
| Outcome indicator 0.6,<br><br>Population of orangutans and other threatened target species are stable or increasing in project area, at the end of project, compared to baselines | The orangutan population tends to be stable, that is 2440 by Gunung Palung National Park updated. Based on our assessment in the buffer zone of Gunung Palung over the past three years (monitoring once per year), the density range of Bornean orangutans is 0.87 - 1.4 ind/km square. |
| Outcome indicator 0.7,<br><br>50% of households trained (est. 250 HH) will benefit from an increase of 20% production compared to the baseline, as a result of implemented technical trainings | In the management of Village Forests in Rantau Panjang, Penjalaan, Sempurna, and Riam Berasap villages, there are 2 Village Forest Management Institutions (LPHDs), 8 Social Forestry Business Groups (KUPS), and 13 Farmer Groups actively involved. Over the past three years, a total of 514 individuals have participated in the Darwin project, consisting of 322 men (63%) and 187 women **(37%)**. The involvement of women across these groups reflects efforts to promote more inclusive community-based forest management |
| Output 1 Reduced direct threats to forest habitat and rare and threatened species, through effectively operating joint Protection & Monitoring Units (PMU) | |

| | |
|---|---|
| **Output indicator 1.1**<br><br>Joint Patrol and Monitoring Unit (PMU) agreements between village communities (Rantau Panjang, Penjalaan, Sempurna, Riam Beresapjaya) and GPNP established by Y1 | We completed joint patrols in the second and third years. Illegal loggers were successfully apprehended, and alternative livelihoods were found through a cooperative business venture. In the third year, we successfully apprehended individuals who were clearing land by burning outside the forest area of VF Rantau Panjang. |
| **Output indicator 1.2,**<br><br>Four PMU teams (1 GPNP + 3-4 community rangers), totaling c.20 people, are trained in SMART patrolling/ biodiversity monitoring by end of Y1. | Completed in Year 1. Consent from four villages was obtained to recruit and assign community rangers, along with GPNP rangers, to form PMU. The four PMUs have been recognised by both authorized parties (GPNP Agency and Villages Institutions), as formalised through a PMU Teams Agreement with GPNP Agency |
| **Output indicator 1.3,**<br><br>Workplans and operational areas for PMUs defined by end of Y1. | Completed in Year 1. Patrols are carried out in accordance with the patrol work plan and forest area monitoring. Priority is given to areas that are most threatened and disturbed based on the rate of deforestation between 2015 and 2022 and incidental information from the community. |
| **Output indicator 1.4,**<br><br>A minimum of 5 patrol days are taking place per month, starting in Y2/ Q1 until project end. | Completed by end project. Starting second Year quarter 1, Four PMU teams was deployed to operate 60 patrols along 20 months totalling 300 effective days (approx. 5 days per month per team) and 4620.1 km patrol distances. In the second year, 32 patrols were conducted over 160 days in four project locations. |
| | |
| Output 2. 11,223 people in four communities around Gunung Palung have improved resilience to climate change through improved prevention and management of fires, water table management and peat swamp forest rehabilitation | |
| **Output indicator 2.1.**<br><br>Decreased incidents of uncontrolled fires in 4 target villages with improvements, on both peat and mineral soils, by Y3 compared to 2019 (pre-pandemic). | Completed by end project. Since the project's inception, satellite analysis using NOAA's MODIS hotspot technology has revealed a decrease ranging from 41.67% to 63.15%. A decrease has been seen in the number of hotspots from 19 to 5 in the second year (MODIS/NOAA). |
| **Output indicator 2.2.**<br><br>At least 8 canal-blocking barriers are implemented in peat soil villages, by end of Y2, based on hydrological assessments | Completed by end project. Seven block canals have been constructed around the VF Penjalaan and Rantau Panjang areas. Peatland experts recommended the location and number of canal blocks. As a result, seven canal blocks were constructed. Four of these were in the VF Rantau Panjang area. The other three were in the VF Penjalaan area. The effectiveness of the constructed canals was determined through testing that took place during the rainy season, which ran from December 2024 to March 2025. The rainy season brought significant rises in the water table, showcasing the efficacy of the canal barriers in capturing rainwater. |
| **Output indicator 2.3.**<br><br>10,000 native forest species seedlings have been planted in re-wetted degraded peat swamp forest, with a minimum survival rate of 70%, by project end. | Completed by end project. 10,000 native forest species seedlings have been planted in re-wetted degraded peat swamp forest. Based on the latest evaluation, the current survival rate of the plants is 61%, slightly below the target of 70%. the most resistant tree species to the |

| | conditions of the target site is the *Elaeocarpus mastersii, Syzygium zeilanicum, Lithocarpus* sp, *Palaquium leiocarpum.* |
|---|---|
| **Output 3. Capacity of at least four community groups representing 500 households (>3,000 people) is increased to diversify livelihood opportunities based o5n biodiversity-friendly products** | |
| Output indicator 3.1. community business groups, representing 500HH and of whom >30% of members are women, are established and trained in business planning and finance management by Y1 | A project supported 22 community business groups across four locations, benefiting 463 households (150 women, 313 men) involved in farming, coffee, weaving, honey, horticulture, and fish farming. Trained in business planning and finance management achieved by Y1. On year 2, groups received support in production like market access, and KUPS evaluation for coffee, honey, crafting, and farming (see output 3.1) |
| Output indicator 3.2. Partnerships between community businesses and private sector companies formalised to improve value chains and access markets, by end Y1. | Two business partnership agreements between community business groups and business actors and the private sector have been signed, namely KPH Kayong and the coffee shop "Kopi 101 Pontianak". |
| Output indicator 3.3. At least 50% of the 500 household representatives trained apply the knowledge gained from the project in coffee production, coffee post-harvest processing, handicraft development and product manufacturing from NTFP (e.g., rattan, pandan, bamboo), by Y2 | 134 people were trained to improve their knowledge and capacity in increasing coffee production, post-harvest coffee processing, handicrafts, and product manufacturing. |
| | |
| | |

# Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

| Project Summary | SMART Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| **Impact:**<br>Biodiversity, including orangutan and other threatened species, is thriving in and around Gunung Palung National Park (West Kalimantan, Indonesia), supported by strengthened local institutions, long-term financing and improved community livelihoods. | | | |
| **Outcome:**<br>The Gunung Palung National Park and adjacent village forests are under improved protection and sustainable use through collaborative patrolling, effective fire prevention, and biodiversity-friendly livelihoods. | 0.1 By 2025, the annual deforestation rate in Gunung Palung National Park (GPNP) and adjacent village forests has been reduced by at least 50% compared to pre-pandemic baseline.<br><br>Baseline: Deforestation rate 0.77% (2018)<br><br>0.2 The number of forest crime incidents per year (e.g., illegal logging, hunting of protected species, canal and agricultural encroachment) reduced by 50% compared to baseline, by project end.<br><br>GPNP baselines records:<br>Forest fire incidents: 238 (of which 150 are in village forests/ buffer zone)<br>Encroachment:195 (2020) | 0.1 Annual national land cover re-calculation (MoEF data)<br><br><br><br><br><br><br><br><br><br>0.2 SMART patrol records. | Catastrophic events, such as El Niño droughts, do not cause large scale un-controllable fire events<br><br>Government regulations remain supportive of environmental services markets<br><br>Continuous commitment by GPNP and local community partners<br><br>There are no significant new outbreaks of disease among target species that cause unprecedented losses |
| | 0.3 Number of fire hotspots reduced, through improved community-based fire prevention, zero burning practices and rewetting of peat swamp forests, compared with baseline by end of project (EoP).<br>Baseline: | 0.3 Annual accumulated fire hotspot analysis by national space agency based on Modis/NOAA ([http://lowres-catalog.lapan.go.id/monitoring/](http://lowres-catalog.lapan.go.id/monitoring/)) | |

| | 150 hotspots in 4 target village forest areas (Modis/ NOAA 2019) | | |
|---|---|---|---|
| | | 0.4 Participatory well-being assessment report against baseline, with all relevant data disaggregated by sex. | |
| | 0.4 At least 75% of women and men from 4 target communities (proportional sample representing 11,223 people) report improvements in multiple indicators of well-being by EoP. | | |
| | 0.5 At least 6 community business groups and village institutions (≥3000 people from 500HH) have new access to sustainable financing (PES, biodiversity offsets) or benefit from improved product value chains, contributing to forest protection by EoP | 0.5 Verified Carbon Standards (VCS) Project Design Documents (PDDs)/ Roundtable on Sustainable Palm Oil- Remediation and Compensation Procedure (RSPO RaCP) Concept Notes for village forests, including benefit sharing for PMU operations and livelihoods; Annual community business reports, technical reports on improvements of value chains. | |
| | | 0.6 Participatory well-being assessment report against baseline, with all relevant data disaggregated by sex | |
| | 0.6 50% of households trained (est. 250 HH) will benefit from an increase of 20% production compared to the baseline, as a result of implemented technical training. | | |
| | Other species-specific targets tbc in Y1 | Baseline/ project end biodiversity survey reports for RTE species | |

| Output 1: Reduced direct threats to forest habitat and rare and threatened species, through effectively operating joint Protection & Monitoring Units (PMU) | 1.1. Joint Patrol and Monitoring Unit (PMU) agreements between village communities (Rantau Panjang, Penjalaan, Sempurna, Riam Berasap Jaya) and GPNP established by Y1.<br><br>1.2. Four PMU teams (1 GPNP + 3-4 community rangers), totaling c.20 people, are trained in SMART patrolling/ biodiversity monitoring by end of Y1.<br><br>1.3. Workplans and operational areas for PMUs defined by end of Y1.<br><br>1.4 A minimum of 5 patrol days are taking place per month, starting in Y2/ Q1 until project end.<br><br>1.5. At least one joint patrol involving MoF's law enforcement agency/ police is conducted per year during Y2 and Y3. | 1.1 Signed agreements by Village Heads and GPNP Director.<br><br>1.2 Training reports and test results, with all relevant data disaggregated by sex<br><br>1.3 Standard Operating Procedure (SOP), workplans, including map of operational area<br><br>1.4 Monthly SMART patrol reports<br><br>1.5 Joint patrol report in collaboration with law enforcement agencies per year | The targeted community groups remain committed to join PMUs.<br><br>FFI's Memorandum of Understanding with GPNP remains in place.<br><br>Regulation and policy changes will not impact the conservation partnership agreement between community and GPNP agency<br><br>Trainer community members and GPNP rangers remain healthy and able to complete patrols as intended<br><br>Local fire management authorities (Manggala Agni) and law enforcement agencies (GAKUM/ police) respond to PMU reports. |

| Output 2: | 2.1 Decreased incidents of uncontrolled fires in 4 target villages with improvements, on both peat and mineral soils, by Y3 compared to 2019 (pre-pandemic).<br>Baseline:<br>150 fire hotspots in target village areas (2019) | 2.1 Village fire management regulation; annual MODIS/ NOOA fire hotspot analysis | No El Niño event causing large-scale devastating fires during project period |
|---|---|---|---|
| 11,223 people in four communities around Gunung Palung have improved resilience to climate change through improved prevention and management of fires, water table management and peat swamp forest rehabilitation. | | | Local fire management authority (Manggala Agni) responds to community reports. |
| | 2.2 At least 8 canal-blocking barriers are implemented in peat soil villages, by end of Y2, based on hydrological assessments<br>Baseline:<br>0 canals blocked | 2.2 Canal blocking construction report; water table measurement monthly report (Penjalaan/Rantau Panjang village) | |
| | 2.3 10,000 native forest species seedlings have been planted in re-wetted degraded peat swamp forest, with a minimum survival rate of 70%, by project end. | 2.3 Forest rehabilitation monitoring report. | |
| Output 3:<br>Capacity of at least four community groups representing 500 households (>3,000 people) is increased to diversify livelihood opportunities based on biodiversity-friendly products | 3.1. 4 community business groups, representing 500HH and of whom >30% of members are women, are established and trained in business planning and finance management by Y1. | 3.1. Formal letter by village head; training reports with all relevant data disaggregated by sex. | |
| | 3.2. Partnerships between community businesses and private sector companies formalised to improve value chains and access markets by the end of Y1. | 3.2 Partnership agreements/ contracts | |
| | 3.3. Technical training delivered to at least 500 household representatives (coffee agroforestry production, coffee post-harvest processing, handicraft | 3.3 Training reports/ participant evaluation | |

| | | | |
|---|---|---|---|
| | development and product manufacturing from NTFPs (e.g., rattan, pandan, bamboo) by Y2 | | |
| | 3.4 Training in product development/ value chain development and marketing to four community business groups, with at least 10 participants in each training from each community group, of whom at least 50% are women, by end Y1. | 3.4 Training reports; technical report documenting the development and marketing of community business products; annual reports by community business groups; | |
| | 3.5 Increased income of community business group members through improved value chains for local products by at least 10% by EoP | 3.5 Annual business group reports. | |
| **Output 4:**<br><br>Two village forest institutions have secured long-term funding (at least 10 years) for PMU operations to protect village forests and contribute to community wellbeing | 4.1. Sustainable financing mechanism (national/ international) based on potential buyers/ partners for ecosystem services or biodiversity offsets is identified by Y1<br><br>4.2 At least two community institutions meet international standards (e.g., VCS-CCB, RaCP) required to access ecosystem services markets by end of project | 4.1 Letters of Intent by potential buyers of carbon credits/ partners for biodiversity offsets<br><br>4.2 Project Design Document (VCS) or project concept note (RSPO RACP Annex 7) publicised on standard websites (VCS, RSPO) | Government regulatory framework allows to access national or international carbon markets<br>RSPO palm oil companies are willing to compensate their liabilities for past High Conservation Value (HCV) clearing through village forest programme in target villages |

**Activities**
1.1. Conduct biodiversity baseline assessment and select key target RTE species for monitoring (orangutan is a pre-selected target species)
1.2. Conduct baseline mapping of forest/ land cover using remote sensing/ data, including the drainage canal system
1.3. Conduct village meetings to secure consent of village representatives to establish joint PMUs to patrol GPNP boundaries, GPNP traditional use zones and adjacent village forests
1.4. Assist village forest management institutions to establish a formal agreement with GPNP to establish and operate joint patrol units
1.5. Assist village institutions to recruit community rangers and GPNP to assign a ranger for each patrol group
1.6. Conduct SMART patrol, social safeguards and biodiversity monitoring training
1.7. Assist PMUs to undertake initial threat assessment and gather information on forest crime to define workplans and area of operation

1.8. Develop patrol procedures (collecting, recording, reporting, safeguards) and a coordination mechanism with law enforcement agencies.
1.9. Support operation of monthly monitoring and protection patrols by PMUs
1.10. Support PMUs to monitor adoption of zero burning techniques in four communities
1.11. Facilitate annual joint patrols between PMUs and law enforcement agencies in Year 2 and 3
1.12. Conduct biological monitoring survey of target species in Year 3
1.13. Conduct land cover/ canal monitoring surveys of village forests and GPNP traditional use zones in Year 2 and 3.


2.1. Support collaborative development and agreement of local village regulations for fire prevention
2.2. Facilitate training for zero burning land clearing/ preparation techniques in all 4 villages
2.3. Undertake hydrological peat assessment to inform water table management and canal blocking plans
2.4. Facilitate participatory planning for water table management and canal blocking in Rantau Panjang/ Penjalaan villages
2.5. Construct 8 canal blocks to manage water table in agriculture areas and to re-wet village forest areas
2.6. Conduct monthly monitoring of water table in rewetting areas
2.7. Rehabilitate degraded peat swamp forest areas through enrichment planting of at least 10,000 seedlings of native-forest tree species, including orangutan food species, and maintain/monitor seedlings
2.8. Download data and conduct analysis of fire hotspots (Modis/NOOA) to monitor project impact and inform activities


3.1. Undertake participatory well-being baseline survey including sex-disaggregated data
3.2. Conduct needs assessment for capacity building of community business groups in Riam Berasap Jaya, Sempurna, Penjalaan, and Rantau Panjang villages
3.3. Provide organisational, financial management, business planning and safeguards training to community business groups
3.4. Assist community business groups to develop standard operating procedures, including benefit distribution and grievance mechanisms
3.5. Develop partnerships between community businesses and private sector companies to improve market access
3.6. Provide technical training for sustainable livelihoods (pre-identified options include agroforestry coffee processing and post-harvest processing; sting-less bee honey production, handicraft production/ bamboo product manufacturing)
3.7. Procure and provide essential equipment required for improved production and processing of selected commodities
3.8. Provide training in product/value chain development and marketing to community business groups
3.9. Facilitate community business groups to access additional technical training and/or grant investment from government sources
3.10. Facilitate community business groups to access annual village budget allocation (Dana Desa)
3.11. Undertake repeat PWA at project end to measure project impact on community well being


4.1. Facilitate learning visit and exchange with Manjau village, which has secured 10 years of performance-based payment for environmental services
4.2. Identify potential partners/ investors for VCS Climate, Community & Biodiversity Standards (VCS-CCB) or RSPO RaCP schemes
4.3. Support at least two village institutions to develop project design documents required for VCS CBB standard or project concept note for RSPO RaCP
4.4. Register and upload PDD/ concept note to VCS/ RSPO website
4.5. Develop and agree performance-based payment mechanism and benefit distribution mechanism

# Table 1 Project Standard Indicators

Please see the Standard Indicator Guidance for more information on how to report in this section, including appropriate disaggregation. N.B. The annual total is not cumulative. For each year, only include the results achieved in that year. The total achieved should be the sum of the annual totals.

| DI Indicator number | Name of indicator | If this links directly to a project indicator(s), please note the indicator number here | Units | Disaggregation | Year 1 Total | Year 2 Total | Year 3 Total | Total achieved | Total planned |
|---|---|---|---|---|---|---|---|---|---|
| DI-A01 | Number of people from key national and local stakeholders completing structured and relevant training | 1.2, 3.1 | People | M : W | 34 :18 | 22:9 | | 56:27 | |
| DI-A03 | Number of local/national organisations with improved capability and capacity as a result of project. | 1.2, 3.1 | People | M : W | 112 : 23 | 177 : 113 | 144 : 89 | 433 : 225 | |
| DI-A04 | Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training. | 1.4, 3.3, 3.4 | Number | M : W | 22 : 0 | 144 : 89 | | 166 : 89 | |
| DI-A10 | Proportion sustainable livelihood enterprises established that are functioning at project end (at least a year after establishment). | 05 | Proportion | Business group | | 0,45 (10:22) | | 0,45 (10:22) | |
| DI-A11 | Number of sustainable livelihood enterprises that are profitable (at least a year after establishment) | 3.1 | Number | Business group | | 10 | | 10 | |
| DI-A12 | Annual turnover of established sustainable livelihood enterprises in the project's final year. | 3.5 | IDR/Year | KUPS Ashoka | | 2,132,000 | 18,142,000 | 20,274,000 | |
| | | | IDR/Year | Gapoktan RT 14 | | | 60,651,500 | 60.651.500 | |
| | | | IDR/Year | KUPS Delima | | | 23,427,870 | 23,427,870 | |
| | | | IDR/Year | KUPS Mutiara Agro Lestari | | 9,956,000 | 12,679,500 | 22,635,500 | |
| | | | IDR/Year | KUPS Tani Makmur | | 7,820,000 | 95,093,500 | 102,913,500 | |
| | | | IDR/Year | KUPS Fajar Atsiri | | | 9,824,000 | 9,824,000 | |

| DI Indicator number | Name of indicator | If this links directly to a project indicator(s), please note the indicator number here | Units | Disaggregation | Year 1 Total | Year 2 Total | Year 3 Total | Total achieved | Total planned |
|---|---|---|---|---|---|---|---|---|---|
| | | | IDR/Year | KUPS Kopi Sinar Selatan | | 3,890,000 | 4,480,000 | 8,370,000 | |
| | | | IDR/Year | KUPS Simpang Keramat | | | 2,408,000 | 2,408,000 | |
| | | | IDR/Year | KUPS Rapa Karya Mandiri | | | 60,676,500 | 60,676,500 | |
| | | | IDR/Year | KUPS Rintis Bertunas | | | 51,391,500 | 51,391,500 | |
| DI-B05 | Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement). | 05 | Number of People | Village Forest management /LPHD (M:W) | 28 : 4 | | | | |
| | | | | Business management group (M:W) | | | | | |
| | | | | Total (M : W) | 28:4 | 130:93 | 130:93 | 130:93 | |
| DI-B06 | Number of Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights. | | People | Village Forest (M:W) | 30 | | | | |
| | | | | Zona Pemanfaatan TN (M:W) | | | | | |
| DI-B10 | Number of individuals reporting an adoption of livelihood improvement practices as a result of project activities. | 05 | People | M : W | | 104 : 89 | 104 : 89 | 108 : 178 | |
| DI-B11 | Area identified as important for Biodiversity | 06 | Area (hectare) | Hectare | | | 33,173.89 | 33,173.89 | |
| DI-B12 | Number of policies developed or formally contributed to by projects and being implemented by appropriate authorities. | 2.1 | Number | Subnational | | 2 | | 2 | |

| DI Indicator number | Name of indicator | If this links directly to a project indicator(s), please note the indicator number here | Units | Disaggregation | Year 1 Total | Year 2 Total | Year 3 Total | Total achieved | Total planned |
|---|---|---|---|---|---|---|---|---|---|
| DI-C01 | Number of best practice guides and knowledge products published and endorsed | 3.2 | Number | agreement | | 2 | | | |
| DI-D02 | Number of people whose disaster/climate resilience has been improved. | 03 | People per village | Penjalaan | | 2,802 | 2,802 | 2,802 | |
| | | | | Rantau Panjang | | 4,666 | 4,666 | 4,666 | |
| | | | | Sampurna | | 1,664 | 1,664 | 1,664 | |
| | | | | Riam Berasap | | 2,222 | 2,222 | 2,222 | |
| DI-004 | Stabilised/ improved species population (relative abundance/ distribution) within the project area. | 06 | Density | Ind/Km | | | 0.87 - 1.4 | 0.87 - 1.4 | |
| | | | | | | | | | |
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| | | | | | | | | | |

**Table 2      Publications**

| Title | Type<br><br>(e.g. journals, manual, CDs) | Detail<br><br>(authors, year) | Gender of Lead Author | Nationality of Lead Author | Publishers<br><br>(name, city) | Available from<br><br>(e.g. weblink or publisher if not available online) |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

## Checklist for submission

| | Check |
|---|---|
| Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, scheme, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission? | |
| **Is the report less than 10MB?** If so, please email to [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) putting the project number in the Subject line. | |
| **Is your report more than 10MB?** If so, please consider the best way to submit. One zipped file, or a download option, is recommended. We can work with most online options and will be in touch if we have a problem accessing material. If unsure, please discuss with [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) about the best way to deliver the report, putting the project number in the Subject line. | |
| If you are submitting photos for publicity purposes, **do these meet the outlined requirements** (see section 14)? | |
| **Have you included means of verification?** You should not submit every project document, but the main outputs and a selection of the others would strengthen the report. | |
| **Have you provided an updated risk register?** If you have an existing risk register you should provide an updated version alongside your report. If your project was funded prior to this being a requirement, you are encouraged to develop a risk register. | |
| Have you involved your partners in preparation of the report and named the main contributors | |
| Have you completed the Project Expenditure table fully? | |
| Do not include claim forms or other communications with this report. | |